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EXAMINER	
LEE, PHILIP C	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/684,565	Applicant(s) GELVIN ET AL.	
	Examiner Philip C Lee	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5-7, 9-11*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-63 are presented for examination.

Claim Rejections – 35 USC 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 3, 9, 12-17, 19, 22, 26-28, 33-35, 37-40, 42-45, 47, 50, 52-53 and 60-61 are rejected under 35 U.S.C. 102(e) as being anticipated by Clare et al, U.S. Patent 6,414,955 (hereinafter Clare).

5. As per claims 1, 22 and 60-61, Clare taught the invention as claimed for collecting and processing data in a sensor network, comprising:

coupling a plurality of network elements including at least one node among an environment and at least one client computer (col. 6, lines 10-15; col. 16, lines 4-9);

collecting data from the environment (col. 6, lines 10-15, 18-20);

remotely controlling at least one function of the at least one node (col. 14, lines 12-22);

providing node information including node resource costs and message priority from the at least one node to the plurality of network elements (col. 4, lines 61-65); and

distributing processing of the collected data among the plurality of network elements in response to the node information (col. 4, lines 61-65; col. 20, lines 28-40; col. 21, lines 38-41).

6. As per claim 3, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising supporting at least one communication mode selected form a group consisting of wireless communications, wired communications, and hybrid wired and wireless communications (col. 6, lines 6-9).

7. As per claim 9, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising coupling at least one local user to the at least one node (col. 14, lines 16-22).

8. As per claim 12, Clare taught the invention as claimed in claim 1 above. Clare further taught wherein the at least one node comprises a plurality of node types, wherein the plurality of node types includes at least one node of a first type and at least one node of a second type, wherein a first network having a first node density is assembled using the at least one node of a first type, wherein a second network having a second node density is assembled using the at least one node of a second type, wherein the second network is overlayed onto the first network (col. 4, lines 6-63).

9. As per claim 13, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising predistributing code and data anticipated for future use through the sensor network using low priority messages, wherein the code and the data are downloadable from at least one location selected from a group consisting of storage devices of the plurality of network elements, and storage devices outside the sensor network (col. 8, lines 15-30).

10. As per claim 14, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising automatically organizing the plurality of network elements in response to the node information, wherein the organizing comprises automatically controlling data transfer, processing, and storage within the sensor network (col. 2, lines 36-41).

11. As per claim 15, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising supporting a plurality of levels of synchronization among different subsets of

the plurality of network elements, wherein a first level of synchronization is supported among a first subset of the plurality of network elements, wherein a second level of synchronization is supported among a second subset of the plurality of network elements (col. 6, lines 63-col. 7, lines 4; col. 8, lines 27-39).

12. As per claim 16, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising controlling data processing using at least one processing hierarchy, the at least one processing hierarchy controlling at least one event selected from a group consisting of data classifications, data transfers, data queuing, data combining, processing locations, communications among the plurality of network elements (col. 18, lines 52-col. 19, lines 1).

13. As per claim 17, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising transferring data using message packets, wherein the message packets are aggregated into compact forms in the at least one node using message aggregation protocols, wherein the message aggregation protocols are adaptive to at least one feature selected from a group consisting of data type, node density, message priority, and available energy (col. 21, lines 38-41).

14. As per claim 19, Clare taught the invention as claimed in claim 1 above. Clare further taught wherein the at least one function includes data acquisition, data processing, communication, data routing, data security, programming, and node operation (col. 14, lines 16-22).

15. As per claim 26, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising coupling the at least one node to at least one sensor selected form a group consisting of seismic, acoustic, infrared, thermal, force, vibration, pressure, humidity, current, voltage, magnetic, biological, chemical, acceleration and visible light sensors (col. 6, lines 13-20).

16. As per claim 27, Clare taught the invention as claimed in claim 26 above. Clare further taught comprising:

processing data gathered by the at least one sensor (col. 4, liens 34-38);

generating a predetermined identifying code representing the processed data (col. 4, lines 56-60); and

propagating the identifying code through the sensor network, wherein a high priority message containing information regarding a high priority event is represented by a high priority message code, and wherein receipt of the high priority message code by the at lest one node invokes a priority protocol that causes message packets to be broadcast to nodes adjacent to a path that will inhibit messaging from nodes not engaged in conveying the information regarding the high priority event (col. 4, lines 56-col. 15, lines 8; col. 16, lines 28-49).

17. As per claim 28, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising self-assembling the plurality of network elements, wherein search and

acquisition modes of the at least one node search for participating ones of the plurality of network elements, wherein a determination is made whether each of the participating ones of the plurality of network elements are permitted to join the sensor network using a message hierarchy, wherein the sensor network is surveyed at random intervals for new nodes and missing nodes (col. 3, liens 48-49; col. 6, lines 37-62; col. 7, lines 66-col. 8, lines 48).

18. As per claim 33, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising managing the sensor network as a distributed and active database using a distributed resource management protocol, wherein the plurality of network elements are reused among different applications, wherein the network elements are used in multiple classes of applications (col. 18, lines 65-col. 19, lines 4; col. 3, lines 55-65; col. 20, lines 58-65).

19. As per claim 34, Clare taught the invention as claimed in claim 1 above. Clare further taught wherein the plurality of network elements further comprises at least one database including at least one storage device selected from a group consisting of storage devices coupled to at least one of the plurality of network elements and storage devices of the at least one node (col. 8, lines 15-21; col. 10, lines 41-42).

20. As per claim 35, Clare taught the invention as claimed in claim 34 above. Clare further taught wherein the at least one database comprises data-driven alerting methods that recognize conditions on user-defined data relationships including coincidence in signal arrival, node power status, and network communication status (col. 15, lines 11-18).

21. As per claim 37, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising:

collecting data by the at least one node (col. 18, lines 35-42);

performing at least one operation on the collected data in response to parameters established by a user, the at least one operation selected from a group consisting of energy detection, routing, processing, storing, and fusing (col. 18, lines 42-50).

22. As per claim 38, Clare taught the invention as claimed in claim 37 above. Clare further taught wherein the routing, processing, storing, and fusing are performed in response to at least one result of the energy detection (col. 18, lines 35-38).

23. As per claim 39, Clare taught the invention as claimed in claim 37 above. Clare further taught wherein the routing comprises selecting at least one data type for routing, selecting at least one of the plurality of network elements to which to route the selected data, selecting at least one route to the selected at least one of the plurality of network elements, and routing the selected at least one data type to the selected at least one of the plurality of network elements (col. 18, lines 48-67).

24. As per claims 40 and 44, Clare taught the invention as claimed in claim 37 above. Clare further taught wherein the processing comprises selecting at least one data type for processing, selecting at least one processing type, selecting at least one of the plurality of network elements

to perform the selected at least one processing type, and transferring the selected at least one data type to the selected at least one of the plurality of network elements using at least one route through the sensor network (col. 18, lines 35-66).

25. As per claim 42, Clare taught the invention as claimed in claim 40 above. Clare further taught comprising aggregating data processed in a plurality of nodes for further processing by other nodes (col. 21, lines 29-41).

26. As per claim 43, Clare taught the invention as claimed in claim 40 above. Clare further taught comprising aggregating data processed by the at least one node for reporting to at least one user (col. 14, lines 16-22).

27. As per claim 45, Clare taught the invention as claimed in claim 37 above. Clare further taught wherein the fusing comprises transmitting at least one query request from a first node to at least one other node, wherein the first node collects data from the at least one other node in response to the at least one query request and processes the collected data (col. 4, lines 13-20).

28. As per claim 47, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising determining a position of the at least one node (col. 7, lines 60-65).

29. As per claim 50, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising providing location and time information to the plurality of network elements using a Global Positioning System (GPS) device (col. 7, lines 62-65).

30. As per claim 52, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising communicating among the plurality of network elements using multihop communications (col. 5, lines 16-20).

31. As per claim 53, Clare taught the invention as claimed in claim 1 above. Clare further taught wherein the environment is at least one environment selected from a group consisting of electronic equipment, mechanical equipment, electro-mechanical equipment, a facility, a structure, a material, a transportation system, a vehicle, an outdoor area, an indoor area, a biological system, a person, and an animal (col. 3, lines 55-59).

Claim Rejections – 35 USC 103

32. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

33. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clare in view of Ginossar, U.S. Patent 6,477,143 (hereinafter Ginossar).

34. As per claim 2, Clare taught the invention substantially as claimed wherein the at least one node includes sensing, processing, communications, and storage devices supporting a plurality of processing (col. 3, lines 55-62; col. 18, lines 41-42). Clare did not teach devices in the at least one node support plurality of protocol layers. Ginossar taught the at least one node includes sensing, processing, communications, and storage devices supporting a plurality of protocol layers (col. 21, lines 26-30).

35. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Ginossar because Ginossar's method of supporting plurality of protocol layers would increased the applicability of Clare's system by demonstrating applications of the sensor node in a computer network operative in accordance with a TCP/IP protocol.

36. Claims 4-6, 8, 48-49, 51, 55-59 and 62-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clare in view of Villa et al, U.S. Patent 6,550,012 (hereinafter Villa).

37. As per claim 4, Clare taught the invention as claimed in claim 1 above. Clare did not specifically teach including one gateway, one server, and one network. Villa taught comprising coupling the at least one node to the at least one client computer through the plurality of network elements, wherein the plurality of network elements includes at least one gateway, at least one server, and at least one network (col. 1, lines 61-64).

38. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Villa because Villa's system of including a gateway, a server and a network would increased the field of use by including different system environment in their system.

39. As per claim 5, Clare and Villa taught the invention as claimed in claim 4 above. Clare further taught comprising performing at least one function using the at least one gateway, wherein the at least one function is selected from a group consisting of protocol translation, sensor network management, management of transmissions from a remote user, and interfacing with at least one communication physical layer including wired local area networks, packet radio, microwave, optical, wireline telephony, cellular telephony, and satellite telephony (col. 16, lines 17-21).

40. As per claim 6, Clare and Villa taught the invention as claimed in claim 4 above. Clare further taught wherein the at least one network comprises wired networks, wireless networks, and hybrid wired and wireless networks, wherein the at least one network comprises at least one network selected from a group comprising the internet, local area networks, wide area networks, metropolitan area networks and information service stations (col. 1, lines 14-17).

41. As per claim 8, Clare and Villa taught the invention as claimed in claim 4 above. Clare further taught wherein the plurality of network elements further includes at least one device selected form a group consisting of repeaters and interrogators (col. 3, lines 61-62).

42. As per claim 48, Clare taught the data could be remotely transferred among the plurality of network elements (col. 14, lines 12-22). Clare did not teach transferring software. Villa taught comprising transferring software among the plurality of network elements (col. 7, lines 48-54).

43. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Villa because Villa's teaching of transferring software would enhanced Clare's system by increasing the field of use for their system.

44. As per claim 49, Clare did not teach using public key security protocol. Villa taught comprising protecting communications using at least one public key security protocol (col. 10, lines 21-31; col. 13, lines 32-38).

45. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Villa because Villa's method of using public key would improved the security of Clare's system by allowing only the authorized receivers to decode messages in the communication network (col. 10, lines 18-20).

46. As per claim 51, Clare did not teach using at least one communication modem. Villa taught communication among the plurality of network elements using at least one communication modem (col. 7, lines 33-37).

47. As per claims 55, 58-59 and 62-63, Clare taught the invention substantially as claimed for providing a sensor network, comprising:

coupling a plurality of network elements including at least one node among at least one environment and at least one client computer (col. 6, lines 10-15; col. 16, lines 4-9)

remotely controlling functions of the plurality of network elements (col. 14, lines 12-22);

providing node information including node resource cost and message priority to the plurality of network elements in response to at least one parameter of at least one signal received from the at least one environment (col. 4, lines 61-65); and

controlling at least one function of the plurality of network elements in response to the node information (col. 4, lines 61-65; col. 20, lines 28-40; col. 21, lines 38-41).

48. Clare did not teach means of coupling with the Internet. Villa taught coupling the plurality of elements using the Internet (col. 7, lines 51-54).

49. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Villa because Villa's method of coupling using the internet would increased the applicability of Clare's system by extending the applications of the sensor node couple to a network using the internet.

50. As per claim 56, Clare and Villa taught the invention as claimed in claim 55 above. Clare further taught wherein the at least one parameter is remotely programmed using the at least one client computer (col. 14, lines 12-22).

51. As per claim 57, Clare and Villa taught the invention as claimed in claim 55 above. Clare further taught wherein the at least one function includes at least one function selected from a group consisting of programming, configuring, assembling the plurality of network elements, distributing processing among the plurality of network elements, establishing communication paths among the plurality of network elements, selecting at least one mode of communication among the plurality of network elements, distributing data among the plurality of network elements, storing data, organizing at least one subnetwork among the plurality of network

elements, controlling synchronization among the plurality of network elements, assembling data products, and reporting (col. 14, lines 16-24).

52. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clare in view of Lee et al, U.S. Patent 5,937,163 (hereinafter Lee).

53. As per claim 7, Clare taught wherein data includes signals or images, wherein code includes signal processing, decision support, and database elements, and wherein management includes operation of the at least one node and the sensor network (col. 18, lines 65-col. 19, lines 1). Clare did not teach using web-based tools for remote access. Lee taught comprising internetworking among the plurality of network elements to provide remote accessibility using World Wide Web-based tools for data, code, management, and security functions (coll. 8, lines 50-57).

54. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Lee because Lee's means of remotely accessing using web-based tools would increased the efficiency of Clare's system by allowing a remote user to manage the plurality of network elements through the internet.

55. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clare in view of Pelissier et al, U.S. Patent 6,661,773 (hereinafter Pelissier).

56. As per claim 10, Clare taught the invention as claimed in claim 1 above. Clare did not teach a redundant information pathway. Pelissier taught comprising establishing at least one redundant information pathway among the plurality of network elements (col. 5, lines 65-col. 6, lines 5).

57. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Pelissier because Pelissier's method of redundant information pathway would increased the reliability in Clare's system by providing an alternated route when an interruption occur within the network (col. 3, lines 35-39).

58. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clare in view of "Official Notice".

59. As per claim 11, Clare taught the invention as claimed in claim 1 above. Clare did not specifically teach wherein the network elements sets are layered. However, Clare taught wherein the network elements sets could be integrated on a chip (col. 19, lines 14-20). "Official Notice" is taken that the concept of layered structure of the network elements sets on a chip is known and accepted in the art. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include the network elements sets in a layered structure to decrease the space require by the network elements sets.

60. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clare in view of Diehl et al, U.S. Patent 5,563,948 (hereinafter Diehl).

61. As per claim 18, Clare taught the invention as claimed in claim 17 above. Clare did not teach including decoy message. Diehl taught wherein the message packets include decoy message packets, wherein information to be transferred is impressed on random message packets to provide communication privacy (col. 5, lines 14-17, 49-51).

62. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Diehl because Diehl's method of using decoy message would improved the security of Clare's by preventing unauthenticated users from intercepting user information.

63. Claims 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clare in view of Weinberger, U.S. Patent 6,499,027 (hereinafter Weinberger).

64. As per claim 20, Clare taught the invention as claimed in claim 1 above. Clare further taught comprising coupling at least one preprocessor to at least one processor (col. 21, lines 29-41) wherein remote reprogramming and control of the at least one device are supported (col. 14, lines 12-22. Clare did not specifically detailing the use of application programming interfaces. Weinberger taught a plurality of application programming interfaces (APIs) in the at least one node, wherein the plurality of APIs are coupled to control at least one device selected from a

group consisting of sensors, actuators, communications devices, signal processors, information storage device, node controllers, and power supply devices (col. 15, lines 38-41).

65. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Weinberger because Weinberger's method of using Application programming interface would increased the efficiency of Clare's system by providing rapid prototyping within the constraints of the application programming interface (col. 15, lines 43-46).

66. As per claim 21, Clare and Weinberger taught the invention as claimed in claim 20 above. Weinberger further taught wherein the plurality of APIs is layered (col. 15, lines 38-41).

67. As per claim 23, Clare and Weinberger taught the invention as claimed in claim 22 above. Clare further taught wherein information transfer among the plurality of network elements is controlled using a synchronism hierarchy established in response to the resource information and message priority information (col. 6, lines 63-col. 7, lines 4; col. 8, lines 27-39).

68. As per claim 24, Clare and Weinberger taught the invention as claimed in claim 20 above. Clare further taught wherein the at least one preprocessor performs at least one function selected from a group consisting of data acquisition, alert functions, and controlling at least one operating state of the at least one node (col. 20, liens 28-40), wherein the at least one processor

performs at least one function selected from a group consisting of signal identification, database management, adaptation, reconfiguration, and security (col. 18, lines 52-56).

69. As per claim 36, Clare taught comprising implementing the at least one database in small foot print databases at a level of the at least one node (col. 8, lines 15-21). Clare did not teach including a standard query database. Weinberger taught comprising a standard query language (SQL) database system at a level of at least one server (col. 5, lines 6-13).

70. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Weinberger because Weinberger's method of including a standard query language database system would increased the field of use of Clare's system by including different components of the network environment in their system.

71. Claims 25 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clare in view of Pottie et al, applicant admission of prior art (hereinafter Pottie).

72. As per claims 25 and 41, Clare taught the invention as claimed in claims 1 and 40 above. Clare did not teach decision probability of a detected event. Pottie taught comprising controlling data processing and transmission in the at least one node in response to a decision probability of a detected event (page 3, paragraph 5).

73. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Pottie because Pottie's method of using detection probability would increased the likelihood of detection in Clare's system by providing detection strategy based on the probability of detecting an event.

74. Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clare in view of Lin et al, Applicant Admission of Prior Art (hereinafter Lin).

75. As per claim 29, Clare taught the invention as claimed in claim 1 above. Clare did not teach self-assembling the elements into a multi-cluster network. Lin taught comprising self-assembling the plurality of network elements into a multi-cluster network (Abstract; page 4, paragraph 2-3).

76. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Lin because Lin's system of self-assembling the plurality of network elements into a multi-cluster network would increased the robustness of Clare's system by allowing self-assembling of elements into the cluster network in the event of topological changes (abstract).

77. As per claims 30-31, Clare and Lin taught the invention substantially as claimed in claim 29 above. Lin further taught directing at least one node to become at least one base node of a

particular cluster number and directing at least one other node to become at least one remote node of a particular cluster number (page 4, paragraph 3, *Lemma 1*). It is inherent that if a start node is selected as a base node, nodes adjacent to the base node are remote nodes.

78. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clare and Lin in view of Pottie.

79. As per claim 32, Clare and Lin taught the invention as claimed in claim 29 above. Clare and Lin did not specifically detailing means of establishing synchronism. Pottie taught comprising establishing synchronism among the plurality of network elements using the assembly packets (page 7, paragraph 1).

80. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare, Lin and Pottie because Pottie's means of synchronism would increased the reliability in Clare's and Lin's system by detecting failure of the network elements using assembly packets.

81. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clare in view of Barry et al, U.S. Patent 6,504,631 (hereinafter Barry).

82. As per claim 46, Clare taught the invention as claimed in claim 1 above. Clare did not teach producing energy beam from the plurality of nodes. Barry taught wherein the at least one node comprises a plurality of nodes with each of the plurality of nodes including at least one bi-static sensor and a generator for producing at least one energy beam that is radiated from the plurality of nodes, wherein the at least one energy beam comprises a combined probe beam and signal code for beam intensity control and propagation measurement, wherein the at least one energy beam is modulated in time to provide an identifying code corresponding to a source node, wherein the at least one energy beam is a type selected from a group comprising infrared, visible, acoustic, and microwave beams (col. 5, lines 1-11; col. 6, lines 49-58).

83. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Barry because Barry's system of the plurality of nodes that generate beam would enhanced Clare's system by using energy beam to communicate among the plurality of nodes.

84. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clare in view of Larsson, U.S. Patent 6,389,483 (hereinafter Larsson).

85. As per claim 54, Clare taught the invention as claimed in claim 1 above. Clare did not teach coupling a plurality of software modules using interfaces. Larsson taught comprising:

providing a plurality of software modules (col. 9, lines 56-63);

supporting couplings among the plurality of software modules using a plurality of interfaces (col. 2, lines 11-18; col. 10, lines 2-4);

reusing the plurality of interfaces among the plurality of software modules by changing at least one inter-module coupling (col. 18, lines 65-col. 19, lines 3); and

dynamically configuring the plurality of software modules at run-time (col. 6, lines 55-59; col. 25, lines 1-2).

86. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Clare and Larsson because Larsson's system of dynamically configuring the software modules would increased the adaptability of Clare's system by allowing reuse of the old software modules by dynamically modifying the old software modules (col. 1, lines 58-61).

CONCLUSION

87. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Agre et al, U.S. Patent 6,208,247, disclosed a wireless integrated system using multi-hop transmission.

Kail, IV, U.S. Patent 5,959,529, disclosed a wireless integrated sensors network with remote programming capability.

Poor, U.S. Patent 6,028,857, disclosed a self-organizing wireless network and defined the cost criterions.

88. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

89. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (703)305-7721. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday.

90. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703)305-8498. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7239.

91. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)350-6121.

P.L.

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